



US006079125A

**United States Patent** [19]**Quellais et al.**[11] **Patent Number:** **6,079,125**[45] **Date of Patent:** **Jun. 27, 2000**[54] **MULTILAYER SOLE FOR SPORT SHOES**[75] Inventors: **Jacques Quellais**, Saint-Jorioz;  
**Francois Girard**, Veyrier Du Lac, both  
of France[73] Assignee: **Salomon S.A.**, Chavanod, France[21] Appl. No.: **08/319,096**[22] Filed: **Oct. 6, 1994****Related U.S. Application Data**[63] Continuation of application No. 07/995,083, Dec. 22, 1992,  
abandoned.[30] **Foreign Application Priority Data**

Dec. 24, 1991 [FR] France ..... 91 16275

[51] Int. Cl.<sup>7</sup> ..... **A43B 13/00; A43B 13/12**[52] U.S. Cl. .... **36/25 R; 36/30 R; 36/107;**  
36/114[58] **Field of Search** ..... 36/30 R, 107,  
36/114, 108, 76 C, 28, 43, 44, 140, 91,  
25 R, 102, 27, 29[56] **References Cited****U.S. PATENT DOCUMENTS**

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*Primary Examiner*—Paul T. Sewell*Attorney, Agent, or Firm*—Pollock Vande Sande &  
Amernick[57] **ABSTRACT**

The sole comprises three layers, including (a) an outer or ground contact sole (7) having flexibility, ground-gripping, and abrasion-resistance properties, (b) an upper or comfort layer (8) positioned directly beneath the foot and having elastic shock-absorption properties, and (c) an intermediate layer or rib (9) positioned directly between the upper portion of the contact layer (7) and the lower portion of the comfort layer (8) and having torsional rigidity properties which provide both for the distribution of shocks sensed by the contact layer (7) and for their diffusion over the comfort layer (8) before they come into contact with the foot (4).

**27 Claims, 6 Drawing Sheets**